



Applicability of biogas technology in rural development and green house gas mitigation

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Year: 2013
Journal: International Journal of Chemtech Research. 5 (2): 747-752

Abstract:

Non-commercial sources like firewood, dung and agricultural waste are major sources of energy in rural India. These sources have a great energy potential and energy production can be enhanced by switching the mode of generation. Cow dung is used as a cooking fuel by drying it into cakes which gives only 11 per cent energy and apart from this causes environmental pollution, indoor air pollution which leads to health disorders. Biomethanation is an excellent option to overcome these harmful effects of traditional cooking fuels. Biogas so produces is less polluting and can also replace fossil fuels like kerosene and coal in everyday life. A survey was carried out in Bhopal-Sehore region to investigate satisfaction level and benefits actually experienced by the biogas users. This survey includes 22 families which are using biogas for cooking purposes and slurry as fertilizer, 100 per cent families experienced less time consuming and convenient cooking with biogas and all of them noticed health improvement, 96 per cent of them are using digested biogas slurry as fertilizer and all of them stated that it is very helpful in improving soil structure and yield. 90 per cent farmers are able to reduce their use of chemical fertilizer. This paper estimation of green house gas mitigating potential of biogas plants which is up to 262.5 kg CO₂/day and 6.25 kg CH₄/day. If a 2m³ Biogas plant is installed in a family of 4 persons it can save up to 2,880 kg wood/year or 6 LPG Cylinders.

Source: <http://sphinxesai.com/2013/conf/chemtecconf4.htm>

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Air Pollution

Air Pollution: Particulate Matter, Other Air Pollution

Air Pollution (other): SO₂, NO₂, CO

Geographic Feature:

resource focuses on specific type of geography

Rural

Geographic Location:

Climate Change and Human Health Literature Portal

resource focuses on specific location

Non-United States

Non-United States: Asia

Asian Region/Country: India

Health Co-Benefit/Co-Harm (Adaption/Mitigation): ☒

specification of beneficial or harmful impacts to health resulting from efforts to reduce or cope with greenhouse gases

A focus of content

Health Impact: ☒

specification of health effect or disease related to climate change exposure

General Health Impact

Mitigation/Adaptation: ☒

mitigation or adaptation strategy is a focus of resource

Mitigation

Resource Type: ☒

format or standard characteristic of resource

Research Article

Timescale: ☒

time period studied

Time Scale Unspecified